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10/537,496	12/14/2005	Anssi Hovinen	Q88089	3475
23373 7590 12/06/2010 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER HOFFMANN, JOHN M				
ART UNIT		PAPER NUMBER		
1741				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/537,496

Applicant(s)

HOVINEN ET AL.

Examiner

John Hoffmann

Art Unit

1741

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2010 and 20 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-34 is/are pending in the application.
- 4a) Of the above claim(s) 17-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
Paper No.(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No.(s)/Mail Date _____
- 5) ☐ Notices of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 8, 11-13, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Orita 6192715.

See the 4/20/2010 Office action which addresses all the limitations. Although the scopes of the individual claims are not identical to what was previously claimed and rejected, the present claims do not present any claim limitation which was not previously found to be anticipated by Orita. See the 4/10/2010 Office action and the Arguments section below.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 9-10 , 14-15 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orita 6192715.

Like discussed above: the present claims do not present any claim limitation which was not previously determined to be anticipated or obvious as discussed in the 4/10/2010 Office action. And thus the claims remain rejected as being obvious. See the 4/10/2010 Office action and the Arguments section below.

As to claim 35: although Orita does not teach the flow being laminar, Orita does disclose that the pressure differential is preferably 0.5-2Pa. Applicant discloses it is preferable to use up to 100 mbar of a pressure difference relative to the outside

pressure (spec. page 1, 3rd paragraph). Orita discloses a preferred pressure differential of 0.5 – 2 Pa (col.9, line 51) This corresponds to 0.2-0.005 mbar. Since Orita discloses pressures nearly 1000 times less the upper limit of applicant's invention, it would have been obvious to assume the flow would be laminar. Also, Since Orita's pressure difference is around 0.001 % of that of atmospheric, one would reasonably infer that the pressure would be insufficiently high to create non-laminar flow.

Response to Arguments

Applicant's arguments filed 10/13/2010 and 9/20/2010 have been fully considered but they are not persuasive.

It is argued that there are two kinds of barriers. Examiner does not dispute this. However Examiner is not stipulating that these two kinds are different. Nor does applicant argue that the "kinds" are "different kinds".

Applicant asserts that a pressure difference does not necessarily result in a diffusion barrier. However no evidence or rationale is given to support this assertion. Given a higher pressure at location A and a lower pressure at location B, if there is no physical barrier, the gas at location A will flow towards location B. The movement of a gas from A to B is the movement of the atoms/molecules of the gas from A to B. Clearly any impurity that might diffuse from B to A is going to be impeded by the gas flowing from A to B. It is the same as the common sense notion that it is much easier to smell the smoke of a fire down wind from the fire than down wind.

It may well be that applicant's invention involves some other diffusion impeding effect, however examiner sees no definition in the prior art or in the present specification for the term "diffusion barrier" that excludes Orita's pressure barrier. The plain reading of the term "diffusion barrier" encompasses any barrier to diffusion, by any mechanism, and by any amount of impediment. Examiner also notes a further diffusion barrier can be said to exist: Since the pressure inside the Orita device is about 0.001% higher than ambient, the density of gas molecules would thus be 0.001% higher, and thus the increased number of molecules would make it more difficult to enter. Again the claims do not specify how much of a barrier the barrier must be.

It is also argued that if the concentration of difference (oxygen is used as an example), then the diffusion effect is significant. Examiner does not see any relevance to this because the claims do not require any degree of significance. Again: applicant may be using a far superior diffusion barrier, however the claims do not require any particular effectiveness. Anything that tends to impede diffusion reads on the claimed diffusion barrier.

It is also asserted that any unwanted gaseous molecule contents can be kept out. Examiner disagrees: page 5 lines 25-26 of the present specification clearly states that the barrier "will allow the penetration of the same impurities". And Orita at col. 2, line 40-41 discloses that it is "impossible" to prevent impurities from entering.

It is also argued that Orita does disclose calculating the number of flows, among other things. Examiner fails to see the relevance of this, Since the claims do not recite any steps of calculating anything.

It is also argued that Examiner is using Applicants disclosure to extrapolate that Orita teaches the claimed invention. Examiner properly utilizes applicant's disclosure to interpret applicant's claims. It is axiomatic that claims have to be interpreted in light of the specification. Since applicant discloses (page 5) that a flow of gas counter to the direction of diffusion is the diffusion barrier, then it is proper to interpret the claims based on such disclosure.

It is also argued that the Office has not provided reasonable technical basis for asserting that a diffusion barrier is necessarily present. Examiner apologizes for not being clearer, but he believes that the technical basis presented was sufficient. The flow of gas is clearly a barrier to nearly entry of anything attempting to enter. A flow of gas is going to tend to impede anything else consisting of atoms attempting to move the opposite direction.

IT is argued that claims 1 and 4 are different because claim 1 "recites the flow of gas through the outlet opening". Examiner does not understand this statement. Examiner understands that Claim 1 recites a step of introducing a flow of inert gas, but the equation 2B is for the same "F1" in both claims. That is "F1 stands for the protective gas flow through the inlet opening".

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Thursday, roughly 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Daniels can be reached on 571-272-2450. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner
Art Unit 1741

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